## RISBARCH OF GROUND TRUTH

## FOR ARMY SPACE OPERATIONS TRAINING

BY: DAVID BERGE, DARYL BREITBACH, LENNY GEHRKE USASMDC/ARSTRAT DIRECTORATE OF COMBAT DEVELOPMENT DEPARTMENT OF THE ARMY CIVILIAN SPACE TRAINERS



Members of the 1st Cavalry Space Support Element outside Division Headquarters, Camp Victory, Iraq. *Photo courtesy DCD* 

t is 11 p.m., Monday, Feb. 16, as a team from the U.S. Army Space and Missile Defense Command boards a rotator flight at Baltimore/Washington International Airport bound for Kuwait City. Daryl Breitbach, and his Future Warfare Center Directorate of Combat Development Space instructor/course manager counterparts, Lenny Gehrke and Dave Berge, are beginning a twelve day odyssey which will encompass visits to Army Space professionals in Kuwait, Iraq, Bahrain and Qatar. Their purpose is simple, to gather lessons from the field which will help improve the Space related training conducted by U.S. Army Space and Missile Defense Command's Directorate of Combat Development. In today's intense operational environment the schoolhouse cannot "sit" on old curriculum and expect to be relevant. Field visits inject that critical component of ground truth to what should be taught and how we should train the way we fight.

Moving ahead to 1:30 a.m. on Wednesday, Feb. 18, Breitbach ponders the evening sky in a bus laden staging area adjacent to Kuwait International Airport. Joining several hundred Soldiers, they each uniquely enjoy the early morning hours as a mini dust storm blows fine grains of sand through their otherwise tranquil evening rest stop. Eventually, Breitbach and Berge make their way to Camp Arifjan, Kuwait, arriving just in time to miss breakfast at the DFAC (dining facility). However, the rest of the day proves to be a success as they meet with MAJ Phil Speth, Combined Forces Land Component Command/Army Central Command Space Support Element, and the Chief Army Central Command Trainer, COL Laura Singer, to discuss the integra-

maintaining the data needed, and c including suggestions for reducing	lection of information is estimated to ompleting and reviewing the collect this burden, to Washington Headqu uld be aware that notwithstanding an DMB control number.	ion of information. Send comments arters Services, Directorate for Info	s regarding this burden estimate ormation Operations and Reports	or any other aspect of the 1215 Jefferson Davis	nis collection of information, Highway, Suite 1204, Arlington	
1. REPORT DATE <b>2009</b>	2 DEPORT TYPE			3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>		
4. TITLE AND SUBTITLE  In Search of Ground Truth for Army Space Operations Training				5a. CONTRACT NUMBER		
				5b. GRANT NUMBER		
				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Army Space & Missile Defense Command, Army Forces Strategic  Command, Redstone Arsenal, AL, 35809				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAIL Approved for publ	ABILITY STATEMENT ic release; distributi	on unlimited				
13. SUPPLEMENTARY NO	OTES					
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>	Same as Report (SAR)	4		

**Report Documentation Page** 

Form Approved OMB No. 0704-0188 In today's intense operational environment, the schoolhouse cannot 'sit' on old curriculum and expect to be relevant.

tion of Space training into the RSOI (reception, staging, onward integration) process conducted at Camp Buerhing, Kuwait. The addition of this Space training will be a huge step in preparing Soldiers deploying into the "box" on how Space capabilities can support their tactical operations and save lives.

It is now 11 p.m. and time to board an aircraft again – though it is now Wednesday evening and the destination is Baghdad. Breitbach is tired, but excited at the opportunity that awaits him – spending four days with the Army Space community at Camp Victory, Iraq. The C-130 flight into Baghdad International Airport is uneventful and MAJ Neil MacCloud, Multi-National Corps-Iraq (MNC-I) Space, has patiently waited for the post midnight arrival. MacCloud and the rest of the XVIII Airborne Corps/MNC-I staff have been on the ground for thirteen months, sacrificing daily for the sake of the mission. They're tired and ready to go home, but still fully focused on getting the job done right. Later that morning Breitbach, Speth and Berge meet with LTC Matt Burrow (Chief of MNC-I Space Ops), and several of his staff members. It is evident early on that the MNC-I Space staff is a great model of how Space can be effectively integrated into a challenging counterinsurgency environment. Eventually, over the next few days Breitbach, Berge and crew meet with the three Division Space Support Elements in Iraq (10th Mountain, 25th Infantry Division, and 1st Cavalry), with the Army Space Support Team supporting MNC-I, other members of the 1st Space Brigade, and elements of the MNC-I staff that rely heavily upon Space assets in their daily operations. The time spent is fruitful, and several key training and doctrine related lessons can be derived from these "in the box" discussions. These include:

• FA40s must have a balance of in-depth understanding of complex Space capabilities, how the Army fights,

combined with outstanding Army staff officer skills to be effective and relevant. Although having an effective reachback to key Space organizations is needed (Joint Space Operations Center, National Air and Space Intelligence Center, Army Forces Strategic Command Advanced Geospatial Intelligence node, etc), the FA40 must more importantly have the ability to quickly recognize potential Space issues, assess the impact on the operational mission, and than have the briefing skills to articulate the issue to the appropriate staffs. For example, MAJ Cecil Strickland (Army Space Support Team Chief supporting MNC-I) took immediate action to analyze the mission ramifications when the Iridium communications satellite collided with a Russian satellite in early February of this year. Strickland recognized the problem, conducted the analysis, and than shared the results (operational impacts) with the MNC-C staff.

• Space Support Elements (especially at Divisions) are fully engaged in technical operations whose impact for USASMDC DCD needs to remain a key element of FA40 training. Even though Space doctrine is still emerging in certain areas of these operations, the critical mission impacts that it has at the highest level of MNC-I and Multi-National Division commands make it imperative that this subject be covered in detail during the Space Operations Officer Qualification Course. The tougher question will be if and when the Army gets into a conventional warfight with a "peer Space adversary," whether the Space staff has the sufficient skill, time and resources to tackle both the technical operations and the probable myriad number of problem sets associated with our Force Enhancement (Intelligence, Surveillance and Reconnaissance; EM; Satellite Communication; Positioning, Navigation and Timing;



Members of the 10th Mountain Group Space Support Element staff, Camp Victory, Iraq. *Photo courtesy DCD* 

Missile Warning) and Space Control (OSC, DSC, Space Situational Awareness) mission areas.

Concurrent to the Breitbach/Berge team visit to Baghdad, Gehrke began a solo mission focusing on the Commercial Exploitation Team in Bahrain. The work of the Team was well documented in the last edition of the Army Space Journal, but this visit helped the FWC-DCD staff in collecting that vital ground truth on the operational contributions of commercial imagery exploitation capabilities. When asking the imagery intelligence analyst community how much of their information they share with coalition forces, the answer is little to none due to classification levels of their products. If you can't share information with coalition forces, how can they become self sufficient in producing products themselves? The answer is, provide them unclassified products, and then train them on producing those products. This can be done by accessing commercially collected and exploited imagery. Not every picture taken needs an imagery analyst to provide finished intelligence in order for commanders and or coalition forces to identify activity and placements on the ground. A picture is worth a thousand words and it doesn't take a genius to identify their house from the imagery provided on Google Earth. The Commercial Exploitation Team may have the most simplistic of operations compared to an Army Space Support Team, but the number of products produced and the diversity of customers are impressive. Not only is their operations impressive, but the facilities are outstanding. Gehrke said his farewells in Bahrain and was off to Qatar to join forces with Berge and Breitbach, and to visit the Combined Air Operations Center.

Linking up with Gehrke, Berge and Breitbach's arrival in Qatar started the assessment of Space operations in the Combined Air Operations Center. Breitbach and Berge then proceeded to board another C-130 they hoped was bound

for Qatar. However, the trip from Baghdad proved not to be a direct one as they made several stops at various U.S. Marine heavy locations in the western Iraqi desert. It was an interesting experience, and the closest they got to the Syrian border during their time in the Middle East. Eventually, by early evening the team arrived at Al Udeid Air Base, Qatar, and managed to get through Qatari customs – though Breitbach was delayed by Qatari officials for almost thirty minutes (who knows why?). The team thankfully then linked up with Gehrke and LTC Victoria Miralda, Deputy Director Space Forces, and MAJ Chris Crawford, 1st Space Brigade Forward Planner, friendly and familiar faces from USASMDC/ARSTRAT.

The primary focus in Qatar was to learn how the Combined Forces Air Component Command executes support to air and Space operations, primarily through the Director of Space Forces (DS4) shop, which conducts the Space coordination authority mission as outlined in JP 3-14.

Miralda was very busy (the Director Space Forces Chief was on mid tour leave), but she was gracious in taking care of the team during their visit. Miralda has been on station as the Deputy Director Space Forces since November 2008, and has the tough job of integrating and coordinating Space operations within the Central Command Area of Responsibility. In addition to her, other members of the Army Space community have recently been added to the Combined Forces Air Component Command staff. Most significantly, the 1st Space Brigade has initiated the deployment of an Army Space Coordination Element into the Battlefield Coordination Detachment. The Detachment is an approximate forty person Army staff which ensures Army mission requirements are integrated into the Combined Air Operations Center ATO, and are otherwise understood by the Air Force personnel assigned to the Combined Air Operations Center staff. The Army Space Coordination Element, led by Crawford, will further ensure that Army Space



From left to right, Dave Berge, Lenny Gehrke and Daryl Breitbach FA40 Space instructors/course managers with the Directorate of Combat Development traveled to Kuwait, Iraq, Bahrain and Qatar to gather lessons learned that will assist them in conducting Space related training. *Photo courtesy DCD* 

issues are effectively addressed and integrated both in the Battlefield Coordination Detachment, as well as throughout the Combined Air Operations Center. While in Qatar we also had the opportunity to visit the Silent Sentry site (helps determine character and location of SATCOM interference), and the 1st Space battalion's Joint Tactical Ground Station element, where the staff not only gave us a great mission brief but took us to an outstanding on base eating facility. While visiting JTAGS, LTC Tom James (Commander, 1st Space Battalion) stopped by and generously shared his thoughts and philosophy regarding Space training. Some of our key training and doctrine takeaways from our time in Qatar included:

- The Director of Space Forces shop is doing an outstanding job working a myriad of very tough Space issues, almost all of which cannot be discussed in this open source publication. However, one of our key lessons for future doctrinal discussion are that Space "lanes" of responsibility are either not clear or being doctrinally executed. There has always been a strong argument to place an FA40 on the Battlefield Coordination Detachment staff, but would a full Army Space Coordination Element be better suited elsewhere. Placing an FA40 in the Detachment, making the Director of Space Forces shop theater integration officer an Army position, and maintaining a strong FA40 Lieutenant Colonel in the Deputy Director of Space Forces billet are all success lessons learned to support mission accomplishment.
- We need to continue to foster the integration of Air Force 13S and 13W expertise into Army operations. When the Air Force 13S/W and the Army FA40 put their collective expertise together you can often find a great mix of Space technical savvy and Army operational experience. This combination can work effectively from the Combatant

Commander level down to the Army Division. In fact, the request the 82nd Airborne has to get a 13W assigned for its upcoming rotation is an excellent idea – one that has already worked well with the Army Space Support Team assigned to the Marines at Multi-National Force-West, covering the expansive Anbar province of Iraq. From a school house perspective, we will certainly continue to expand the integration of Air Force Space expertise into the classroom.

The return home began at 12:30 a.m., Feb. 26, getting on another rotator flight at Al Udeid Air Base. The team was fortunate to experience five countries on this single day. In addition to Qatar, they saw a magnificent sunrise over the Mediterranean Sea from the island of Cyprus. Later that morning the next stop was at the base of the beautiful Alps at Aviano, Italy. The third leg took the team through the great European staple for all Americans transiting through Germany – Ramstein, Air Base. Finally, the team wound up back at Baltimore/Washington airport – where the USO had arranged a great welcome for all the troops and airmen that were on the flight. Gehrke even looked the war hero part (bad limp) as he had incurred a nasty foot blister while walking unusually long distances through the desert wastes of Qatar.

It was an outstanding trip which provided regular USASMDC Department of the Army civilians an opportunity to gather key lessons from the field, and allow them to keep the proper focus on their daily job. Additionally, the trip was at minimal cost to USASMDC as the overseas rotator flight cost was already covered by Department of Defense, and most meals were eaten at the DFAC. One note about the DFAC, some of the best cuisine you will ever experience is the dining facility in Baghdad – it can't be beat!